AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of claims in the application.

1. (Currently amended) In a communication network having a plurality of nodes each with an assigned node identifier, a method of checking node identification comprising the steps of:

generating a node signature for the assigned node identifier in each node of the plurality of nodes;

distributing from each node, information data including the assigned node identifier and the generated node signatures of the node to other nodes in the communication network;

in each node, comparing ~~the~~ node signatures in the information data having ~~the same~~ identical node identifiers to detect whether the node signatures of nodes having ~~the same~~ identical node identifiers are different; and

modifying operation of the communication network responsive to a detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

2. (Currently Amended) The method according to Claim 1, wherein the step of generating the node signature for each node of the plurality of nodes comprises generating a code corresponding to an identifier of a component of the node.

3. (Currently Amended) The method according to Claim 1, wherein the step of generating the node signature for each node of the plurality of nodes comprises generating a code corresponding to a quasi-random processing of information received by the node from the network.

4. (Currently Amended) The method according to Claim 1, wherein the step of generating the node signature for each node of the plurality of nodes comprises generating a code corresponding to a timing of a predetermined operation of the node.

5. (Currently Amended) The method according to Claim 1, wherein the step of generating the node signature for each node of the plurality of nodes comprises generating a code corresponding to a sample of information at an interface of the node with the network.

6. (Currently amended) The method according to Claim 1, wherein the modifying of operation of the network comprises the step of sending a message informing a node for managing network operations of the detection of different node signatures of nodes ~~the same~~ identical node identifiers.

7. (Currently amended) The method according to Claim 1, wherein the modifying of operation of the network comprises the step of sending a message informing an operator of the network of the detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

8. (Currently amended) The method according to Claim 1, wherein the modifying of operation of the network comprises the step of ignoring information of nodes detected as having different node signatures for ~~the same~~ identical node identifiers.

9. (Currently amended) The method according to Claim 1, wherein the step of modifying operation of the communication network comprises selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

10. (Currently amended) The method according to Claim 1, wherein the step of modifying operation of the communication network comprises arranging the different node signatures of the nodes of ~~the same~~ identical node identifiers having different node signatures in an ordered list, selecting the node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node signature in a predetermined place in the ordered list, and ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

11. (Currently amended) The method according to Claim 1, wherein the generated node signature is a numeric value, further comprising the step of selecting a node with the lowest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the step of modifying operation of the network comprises

the step of ignoring information of nodes of the ~~the same~~ identical node identifiers detected as having different node signatures except the information of the selected node.

12. (Currently amended) The method according to Claim 1, wherein the generated node signature is a numeric value, further comprising the step of selecting a node with the highest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the step of modifying operation of the network comprises the step of ignoring information of nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

13. (Currently amended) The method according to Claim 1, wherein the modifying of operation of the network comprises removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures from participation in the network.

14. (Currently amended) The method according to Claim 1, wherein the step of modifying operation of the communication network comprises selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

15. (Currently amended) The method according to Claim 1, wherein the step of modifying operation of the communication network comprises arranging the different node signatures of the nodes of ~~the same~~ identical node identifiers having the different node signatures in an ordered list, selecting the node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node signature in a predetermined place in the ordered list, and removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

16. (Currently amended) The method according to claim 1, wherein the generated node signature is a numeric value and further comprising the step of selecting a node with the lowest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures, and wherein the modifying of operation of the network comprises the

step of removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network.

17. (Currently amended) The method according to Claim 16, wherein the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node are removed from participation in the network for a predetermined time.

18. (Currently amended) The method according to claim 1, wherein the generated node signature is a numeric value and further comprising the step of selecting a node with the highest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures, and wherein the modifying of operation of the network comprises the step of removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network.

19. (Currently amended) The method according to Claim 18, wherein the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node are removed from participation in the network for a predetermined time.

20. (Currently amended) The method of Claim 1, wherein the step of comparing node signatures comprises comparing a node signature received from another node to node signatures of information data of nodes of ~~the same~~ identical node identifiers stored in the node.

21. (Currently amended) The method of Claim 1, wherein the step of comparing node signatures comprises comparing the node signatures in information data of nodes having ~~the same~~ identical node identifiers stored in the node.

22. (Original) The method of Claim 1, wherein the step of comparing node signatures comprises comparing node signatures in information data stored in the node having the node's own node identifier and the step of modifying operation of the communication network comprises ceasing transmitting data from the node when different node signatures for the node's own node identifier are detected.

23. (Original) The method of Claim 1, wherein the generated node signature is a numeric value, the step of comparing node signatures comprises comparing node signatures in information data stored in the node having the node's own node identifier, and the step of modifying operation of the communication network comprises generating an ordered list of node signatures for the node's own node identifier and ceasing transmitting data from the node when more than one node signature is detected for the node's own node identifier and the numeric value of the node's own node signature is not in a prescribed place in the ordered list.

24. (Currently amended) A routing node in a communication network having plural routing nodes each with an assigned node identifier comprising:

means for generating a node signature for the assigned node identifier in each node;

means for distributing from each node information data including the assigned node identifier and the generated node signature of the node to other nodes in the communication network;

means in each node for comparing the node signatures in information data having ~~the same~~ identical node identifiers to detect whether node signatures of nodes having ~~the same~~ identical node identifiers are different;

means for modifying operation of the communication network responsive to a detection of different node signatures for nodes of ~~the same~~ identical node identifiers.

25. (Currently amended) [[A]] The routing node in a communication network according to claim 24, wherein the means for generating the node signature comprises means for generating a code corresponding to an identifier of a component of the node.

26. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for generating the node signature comprises means for generating a code from a quasi-random processing of information received from the network.

27. (Currently amended) [[A]] The routing node in a communication network according to Claim 26, wherein the quasi-random processing of information received from the network comprises a hashing process responsive to the received information.

28. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for generating the node signature comprises means for generating a code from a timing of a predetermined node event.

29. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for generating the node signature for each node of the plurality of nodes comprises means for generating a code corresponding to a sample of information at an interface of the node with the network.

30. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying of operation of the network comprises means for sending a message informing a node for managing network operations of the detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

31. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying of operation of the network comprises means for sending a message informing an operator of the network of the detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

32. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for modifying operation of the network comprises means for ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures in processing by the node.

33. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying operation of the communication network comprises means for selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and means for ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

34. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying operation of the communication network comprises means for arranging the different

node signatures of the nodes of ~~the same~~ identical node identifiers having the different node signatures in an ordered list, means for selecting the node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node signature in a predetermined place in the ordered list, and means for ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

35. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein each node signature is a numeric value and further comprising means for selecting a node with the lowest numeric value of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the means for modifying the operation of the network comprises means for ignoring the information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node in processing of database information of the routing node.

36. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein each node signature is a numeric value and further comprising means for selecting a node with the highest numeric value of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the means for modifying the operation of the network comprises means for ignoring the information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node in processing of database information of the routing node.

37. (Currently amended) [[A]] The routing node in a communication network according to claim 24, wherein the means for modifying operation of the network comprises means for removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures from participation in the network.

38. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying operation of the communication network comprises means for selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and means for removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

39. (Currently amended) [[A]] The routing node according to Claim 24, wherein the means for modifying operation of the communication network comprises means for arranging the different node signatures of the nodes of ~~the same~~ identical node identifiers having the different node signatures in an ordered list, means for selecting a node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node in a predetermined place in the ordered list, and removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network.

40. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the generated node signature is a numeric value and further comprising means for the node with the lowest numeric value node of the nodes of ~~the same~~ identical node identifiers detected different node signatures, and the means for operation of the network comprises means for removing all of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

41. (Currently amended) [[A]] The routing node in a communication network to Claim 40, wherein the means for removing all of the nodes of ~~the same~~ identical node identifiers detected as having node signatures except the selected node comprises means for removing all of the nodes of ~~the same~~ identical node identifiers detected having different the selected node signatures except the selected node from participation in the network for a predetermined time.

42. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein each node signature is a numeric value and further comprising means for selecting a node with the highest numeric value of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the means for modifying the operation of the network comprises means for removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network.

43. (Currently amended) [[A]] The routing node in a communication network according to Claim 42, wherein the means for removing all of the nodes of ~~the same~~ identical node identifiers

detected as having different node signatures except the selected node comprises means for removing all of the nodes of ~~the same~~ identical node identifiers detected having different node signatures except the selected node from participation in the network for a predetermined time.

44. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for comparing node signatures comprises means for comparing a node signature in information data received from another node to node signatures in information data stored in the node receiving the information data having ~~the same~~ identical node identifiers.

45. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for comparing node signatures comprises means for comparing node signatures in the information data stored in the node for nodes which have ~~the same~~ identical node identifiers.

46. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the means for comparing node signatures comprises means for comparing node signatures in information data stored in the node of nodes having the node's own node identifier and the means for modifying operation of the communication network comprises means for ceasing transmitting data from the node when different node signatures are detected for nodes having the node's own node identifier.

47. (Currently amended) [[A]] The routing node in a communication network according to Claim 24, wherein the generated node signature is a numeric value, the means for comparing node signatures comprises means for comparing node signatures for the node's own node identifier, and the means for modifying operation of the communication network comprises means for generating an ordered list of the node signatures for the node's own node identifier and means for ceasing transmitting data from the node when different node signatures are detected for nodes with the node's own node identifier and the numeric value of the node's own node signature is not in a prescribed place in the ordered list.

48. (Currently amended) In a communication network having a plurality of routing nodes each with an assigned node identifier, a computer usable medium in each routing node having computer readable program units embodied therein comprising:

a first program code unit for generating a node signature for the assigned node identifier in each node;

a second program code unit for distributing from each node information data including the assigned node identifier and the generated node signature of the node to other nodes in the communication network;

a third program code unit in each node for comparing the node signatures in the information data having ~~the same~~ identical node identifiers to detect whether node signatures of nodes having ~~the same~~ identical node identifiers are different; and

a fourth program code unit for modifying operation of the communication network responsive to a detection of different node signatures of nodes having ~~the same~~ identical assigned node identifiers.

49. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with [the] an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the first program code unit comprises a program code unit for generating a code corresponding to an identifier of a component of the node.

50. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the first program code unit comprises a program code unit for generating a code corresponding to a quasi-random processing of information received by the node from the network.

51. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48,

wherein the first program code unit comprises a program code unit for generating a code corresponding to a timing of a predetermined operation of the node.

52. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the first program code unit comprises a program code unit for generating a code corresponding to a sample of information at an interface of the node with the network.

53. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises' a program code unit for sending a message informing a node for managing network operations of the detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

54. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program unit for sending a message informing an operator of the network of the detection of different node signatures of nodes having ~~the same~~ identical node identifiers.

55. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program code unit for ignoring information of nodes of ~~the same~~ identical node identifiers detected as having different node signatures.

56. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48,

wherein the fourth program code unit comprises a program code unit for selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

57. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program code unit for arranging the different node signatures of the nodes of ~~the same~~ identical node identifiers having different node signatures in an ordered list, selecting the node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node signature in a predetermined place in the ordered list, and ignoring information of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node.

58. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the generated node signature is a numeric value, further comprising a program code unit for selecting the node with the lowest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and the fourth program code unit comprises a program code unit for ignoring information of nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the information of the selected node.

59. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the generated node signature is a numeric value, the fourth program code unit comprises a program code unit for selecting a node with the highest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and a

program code unit for ignoring information of nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the information of the selected node.

60. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program code unit for removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures from participation in the network.

61. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program code unit for selecting one of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and a program code unit for removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

62. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the fourth program code unit comprises a program code unit for arranging the different node signatures of the nodes of ~~the same~~ identical node identifiers having the different node signatures in an ordered list, a program code unit for selecting the node of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures with a node signature in a predetermined place in the ordered list, and a program code unit for removing the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

63. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48,

wherein the generated node signature is a numeric value, and further comprising a program code unit for selecting the node with the lowest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures and wherein the fourth program code unit comprises a fifth program code unit for removing all of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network.

64. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 63, wherein the fifth program code unit removes the nodes of ~~the same~~ identical node identifiers detected as having different node signatures except the selected node from participation in the network for a predetermined time.

65. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the generated node signature is a numeric value and the fourth program code unit comprises a program code unit for selecting a node with the highest numeric value node signature of the nodes of ~~the same~~ identical node identifiers detected as having different node signatures, and a program code unit for removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network.

66. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 65, wherein program code unit for removing all of the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network comprises a program code unit for removing the nodes of ~~the same~~ identical node identifiers having different node signatures except the selected node from participation in the network for a predetermined time.

67. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the third program code unit comprises a program code unit for comparing a node signature of information data received from another node with node signatures stored in the node having ~~the same~~ identical node identifiers as the received information data.

68. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the third program code unit comprises a program code unit for comparing node signatures in information data of nodes of ~~the same~~ identical node identifiers that are stored in the node.

69. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to claim 48, wherein the third program code unit comprises a program code unit for comparing node signatures in information data stored in the node with the node's own signatures and the fourth program code unit comprises a program code unit for ceasing transmitting data from the node when different node signatures for the node's own node identifier are detected.

70. (Currently amended) In [[a]] the communication network having [[a]] the plurality of routing nodes each with an assigned node identifier, [[a]] the computer usable medium in each routing node having computer readable program units embodied therein according to Claim 48, wherein the generated node signature is a numeric value, the third program code unit comprises a program code unit for comparing node signatures in information data stored in the node having the node's own node identifier, and the fourth program code unit comprises a program unit for generating an ordered list of the node signatures for the node's own node identifier and a program code unit for ceasing transmitting data from the node when different node signatures are detected for the node's own node identifier and the numeric value of the node's own node signature is not in a prescribed place in the ordered list.